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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/10/2003

Pamela A. Binns

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04/17/2008

Kris T. Fredrick
Patent Services
Honeywell International Inc.
101 Columbia Road
Morristown, NJ 07962

EXAMINER

LIU, BEN H

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

04/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/705,802	Applicant(s) BINNS, PAMELA A.	
	Examiner BEN H. LIU	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on December 28th, 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 5-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This is in response to an amendment/response filed on October 31, 2007.
2. Claims 1-2 and 5-6 have been amended.
3. Claims 9-12 have been cancelled.
4. No claims have been added.
5. Claims 1-8 are currently pending.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levy et al. (U.S. Patent Application Publication 2003/0233445).

It is noted that for claim 5, the preamble is not considered part of the claim limitations and are therefore not examined on the merits.

For claim 5, Levy et al. disclose a method for estimating the latency in a network communication, using measurements made in association with a server with which a client is in communication (*see paragraphs 85-88*). Levy et al. disclose all the subject matter of the claimed invention with the exception wherein the method uses the data transition points to produce a series of aperiodic latency estimation inflection points. However, Levy et al. recite plotting the measured latency data points for analysis (*see figure 14*). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method for estimating the latency in a network communication that plots the latency estimate data points on a graph for further analysis as taught by Levy et al. to produce aperiodic latency estimation inflection points. The motivation for estimating the latency in a network communication that plots the latency estimate data points on a graph for further analysis as taught by Levy et al. to produce aperiodic latency estimation inflection points is to improve the efficiency of the system by providing a visual analysis of performance.

For claim 6, Levy et al. disclose all the subject matter of the claimed invention with the exception wherein the data points are plotted on the X axis of a graph and the empirical probability that the latency exceeds the time is plotted on the Y axis of the graph, such that latency estimation inflection points are selected along the X axis for the hyperperiod to visually represent values at which higher priority periodic message traffic will impact or cause a point of

Art Unit: 2616

inflection on aperiodic latencies. However, Levy et al. recite plotting data points relating to the estimated latency (*see paragraph 382*). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method for estimating the latency in a network communication that plots data points relating to the estimated latency as taught by Levy et al. to visually represent values at which the traffic will impact or cause a point of inflection on aperiodic latencies. The motivation for estimating the latency in a network communication that plots data points relating to the estimated latency as taught by Levy et al. to visually represent values at which the traffic will impact or cause a point of inflection on aperiodic latencies is to improve the efficiency of the system by providing a visual analysis of changes in performance.

For claim 7, Levy et al. disclose all the subject matter of the claimed invention with the exception wherein the aperiodic latency estimation inflection points are formed by binning the aperiodic data points using fluid flow analysis dependent only on the timeline defined by periodic traffic. However, Levy et al. recite measuring the transmission rate which is a measure of how much data is sent over a given time period (*see paragraph 313*). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method for estimating the latency in a network communication that measures the how much data is sent over a given time period as taught by Levy et al. to determine aperiodic latency estimation inflection points. The motivation for estimating the latency in a network communication that measures the how much data is sent over a given time period as taught by Levy et al. to determine aperiodic latency estimation inflection points is to improve the efficiency of the system by providing a visual analysis of changes in performance.

For claim 8, Levy et al. disclose all the subject matter of the claimed invention with the exception wherein the analysis employs an algorithm. However, Levy et al. recite measuring the transmission rate using an algorithm (*see figure 8*). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method for estimating the latency in a network communication that measures the transmission rate using an algorithm as taught by Levy et al. to analyze the estimated latency data points. The motivation for estimating the latency in a network communication that measures the transmission rate using an algorithm as taught by Levy et al. to analyze the estimated latency data points is to improve the efficiency of the system by providing a visual analysis of changes in performance.

Allowable Subject Matter

9. Claims 1-4 are allowed. The following is an examiner's statement of reasons for allowance:

For independent claim 1, the prior art fails to show alone or in combination a method for estimating the latency of aperiodic tasks in systems including the step of estimating the aperiodic latency probability at an inflection point in the hyperperiod as being equal to the number of sample data points less than or equal to the inflection point divided by the total number of collected aperiodic latency sample data points, the data points forming a data point plot that is assumed to be linear between the aperiodic latency inflection points. The prior art of Levy et al. (U.S. Patent Application Publication 2003/0233445) disclose a method for estimating the latency in a network communication, using measurements made in association with a server with which a client is in communication. The method includes plotting the measured latency data points for

Art Unit: 2616

analysis. However, the prior art does not disclose estimating the aperiodic latency probability at an inflection point in the hyperperiod as being equal to the number of sample data points less than or equal to the inflection point divided by the total number of collected aperiodic latency sample data points, the data points forming a data point plot that is assumed to be linear between the aperiodic latency inflection points. Dependent claims 2-4 are allowable because they depend on the allowed claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

10. Claims 1-12 were previously rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended or cancelled the claims to overcome the rejection. In response, the rejection has been withdrawn.

11. The drawings were previously objected because the drawings must show every feature of the invention specified in claim 9. Claim 9 has been cancelled to overcome the rejection. In response, the rejection has been withdrawn.

Conclusion

Art Unit: 2616

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (*See form PTO-892*).

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BEN H. LIU whose telephone number is (571)270-3118. The examiner can normally be reached on 9:00AM to 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/
Supervisory Patent Examiner, Art Unit
2616

BL